

**Abstract**

The invention relates to bi-functionalised metallocenes of general formula (I) where Me= a transition metal, preferably chosen from Fe, Ru and Os, Y and Z, when identical are selected from  $-(CH_2)_n-O-$ ,  $(CH_2)-O-[(CH_2)_2-O]_p-$  and  $-(CH_2)_q-CONH-(CH_2)_r-O-$ , or  $Y=-(CH_2)_s-NH-$  and  $Z=-(CH_2)_t-COO-$ ,  $n$  = a whole number from 3 to 6 inclusive,  $p$ =a whole number from 1 to 4 inclusive,  $q$  = a whole number from 0 to 2 inclusive,  $r$  = a whole number from 0 to 2 inclusive,  $s$  = a whole number from 2 to 5 inclusive,  $t$  = a whole number from 3 to 6 inclusive, R and R' = H atoms or are protective groups used in oligonucleotide and peptide synthesis, where at least one of R or R' is protective group used in oligonucleotide and peptide synthesis and R and R' are as defined below: (i) when Z and Y are selected from  $(CH_2)_n-O-$ ,  $-(CH_2)-O-[(CH_2)_2-O]_p-$  and  $-(CH_2)_q-CONH-(CH_2)_r-O-$ , then R and R' are protective groups used in oligonucleotide synthesis and R is a group which can leave a free OH group after deprotection, preferably a photolabile group such as monomethoxythoxytrityl, dimethoxytrityl, t-butyldimethylsilyl, acetyl or trifluoroacetyl, and R' is a phosphorylated group which can react with a free OH, preferably a phosphodiester, phosphoramidite or H-phosphonate and (ii) when  $Y=-(CH_2)_s-NH-$  and  $Z=-(CH_2)_t-COO-$ , then R is a protective group used in the synthesis of peptides and is an amino-protecting group, preferably 9-fluorenyloxycarbonyl, *t*-butoxycarbonyl or benzyloxycarbonyl and R' = H. The above is applied in marking.